Edexcel International GCSE Physics 4PH1 Learning Plan

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| **Unit: 4 Energy Resources and Energy Transfer** | | **Chapter: 15. Thermal Energy** | | **Hours: 5** |
| Content coverage | Learning outcomes | Resources | Assessment | |
| Section 4: Energy resources and Energy transfers  a) Units  b) Energy transfers | **4.6** describe how thermal energy transfer may take place by conduction, convection and radiation  **4.7** explain the role of convection in everyday phenomena  **4.8** explain how emission and absorption of radiation are related to surface and temperature  **4.9** *practical: investigate thermal energy transfer by conduction, convection and radiation*  **4.10** explain ways of reducing unwanted energy transfer, such as insulation | Video and Powerpoint:  2.5 Thermal Processes  Textbook pages:  Page 139 – Conduction  Page 140 – **Practical** – *Investigate how well different metals conduct heat*  Page 140 – Convection  Page 141 – **Practical** – *Investigate convection currents in water*  Page 142 – Radiation  Page 144 – **Practical** – *Investigate how well different surfaces radiate heat*  Page 145 – Energy efficient houses  Page 147 – Insulating people and animals | Page 148 – 149  Questions (1) to (8)  Chapter 15 Textbook Answers (PDF)  Chapter 15 - exam question - pdf  Chapter 15 - exam question mark scheme – pdf  Chapter 15 - Talking paper video | |

Videos – [www.igcsesciencecourses.com](http://www.igcsesciencecourses.com)

Textbook Ref: Edexcel International GCSE (9-1) Physics Student Book - Pearson (Arnold, Johnson, Woolley))